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AF/2675

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 Attorney Docket No. 108298604US  
 Disclosure No. MUEI-0489

PTO/SB/21 (05-03)

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<b>TRANSMITTAL FORM</b> <i>(to be used for all correspondence after initial filing)</i>		Application Number	09/420,787
		Filing Date	October 19, 1999
		First Named Inventor	Ted Daniels
		Art Unit	2675
		Examiner Name	Doon Y. Chow
Total Number of Pages in This Submission	16	Attorney Docket Number	108298604US

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Signature	
Date	October 8, 2003

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# FEE TRANSMITTAL for FY 2003

Effective 10/01/2003. Patent fees are subject to annual revision.

 Applicant claims small entity status. See 37 CFR 1.27TOTAL AMOUNT OF PAYMENT (\$)330

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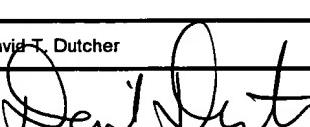
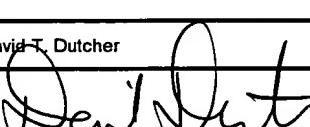
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METHOD OF PAYMENT (check all that apply)				FEE CALCULATION (continued)																																																																																																																																																																																																							
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ADDITIONAL FEES</b> <table border="1"> <thead> <tr> <th>Large Entity</th> <th>Small Entity</th> <th colspan="4"></th> </tr> <tr> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr> <td>1051</td> <td>130</td> <td>2051</td> <td>65</td> <td>Surcharge - late filing fee or oath</td> <td></td> </tr> <tr> <td>1052</td> <td>50</td> <td>2052</td> <td>25</td> <td>Surcharge - late provisional filing fee or cover sheet</td> <td></td> </tr> <tr> <td>1053</td> <td>130</td> <td>1053</td> <td>130</td> <td>Non-English Specification</td> <td></td> </tr> <tr> <td>1812</td> <td>2,520</td> <td>1812</td> <td>2,520</td> <td>For filing a request for ex parte reexamination</td> <td></td> </tr> <tr> <td>1804</td> <td>920*</td> <td>1804</td> <td>920*</td> <td>Requesting publication of SIR prior to Examiner action</td> <td></td> </tr> <tr> <td>1805</td> <td>1,840*</td> <td>1805</td> <td>1,840*</td> <td>Requesting publication of SIR after Examiner action</td> <td></td> </tr> <tr> <td>1251</td> <td>110</td> <td>2251</td> <td>55</td> <td>Extension for reply within first month</td> <td></td> </tr> <tr> <td>1252</td> <td>420</td> <td>2252</td> <td>210</td> <td>Extension for reply within second month</td> <td></td> </tr> <tr> <td>1253</td> <td>950</td> <td>2253</td> <td>475</td> <td>Extension for reply within third month</td> <td></td> </tr> <tr> <td>1254</td> <td>1,480</td> <td>2254</td> <td>740</td> <td>Extension for reply within fourth month</td> <td></td> </tr> <tr> <td>1255</td> <td>2,010</td> <td>2255</td> <td>1,005</td> <td>Extension for reply within fifth month</td> <td></td> </tr> <tr> <td>1401</td> <td>330</td> <td>2401</td> <td>165</td> <td>Notice of Appeal</td> <td></td> </tr> <tr> <td>1402</td> <td>330</td> <td>2402</td> <td>165</td> <td>Filing a brief in support of an appeal</td> <td><u>330</u></td> </tr> <tr> <td>1403</td> <td>290</td> <td>2403</td> <td>145</td> <td>Request for oral hearing</td> <td></td> </tr> <tr> <td>1451</td> <td>1,510</td> <td>1451</td> <td>1,510</td> <td>Petition to institute a public use proceeding</td> <td></td> </tr> <tr> <td>1452</td> <td>110</td> <td>2452</td> <td>55</td> <td>Petition to revive - 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(Complete if applicable)				
Name (Print/Type)	Signature		Registration No. (Attorney/Agent)	Telephone (206) 359-6465
David T. Dutcher			51,638	
Signature			Date	October 8, 2003

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Attorney Docket No. 108298604US  
Disclosure No. MUEI0469

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LJYSON  
10/29/03  
PATENT



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: TED DANIELS  
APPLICATION No.: 09/420,787  
FILED: OCTOBER 19, 1999  
FOR: PORTABLE INPUT DEVICE FOR  
COMPUTER

EXAMINER: DOON Y. CHOW  
ART UNIT: 2675  
CONF. No: 3297

### Appellant's Brief Under 37 C.F.R. § 1.192

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This brief is in furtherance of the Notice of Appeal in this case filed on August 8, 2003. The fee required under 37 C.F.R. § 1.17(c) to file this brief is addressed in the accompanying transmittal letter.

#### I. REAL PARTY IN INTEREST

Micron Technology, Inc. is the owner of the present application.

#### II. RELATED APPEALS AND INTERFERENCES

No related appeals or interferences have been filed that will directly affect, be directly affected by, or have a bearing on the Board's decision in the present appeal.

#### III. STATUS OF CLAIMS

Claims 2-4, 6-16, 18-24, 26-28 and 30-34 are pending in the application. Claims 1, 5, 17, 25, 29 and 35-47 were cancelled during prosecution. Claims 18 and 30 are the subject of this appeal.

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#### **IV. STATUS OF AMENDMENTS**

The claims have not been amended subsequent to the final rejection in the Final Office Action dated May 9, 2003.

#### **V. SUMMARY OF INVENTION**

Portable computers are popular in domestic, business, and industrial environments due to their mobility. (P. 1, ll. 13-15.) For example, portable computers can be connected to a projector to display an image on a projection screen in multimedia or other presentations. (P. 1, ll. 16-19.) In these applications, the portable computer controls the operation of the projector and the content on the projection screen. (P. 1, ll. 19-20.) One problem with these applications is that a user is required to remain physically close to the computer to input data or change the content on the projection screen. (P. 2, ll. 16-18.) To overcome this problem, the user can purchase a separate peripheral device (e.g., a second keyboard) to exercise remote control over the portable computer. (P. 2, ll. 20-22.) Separate peripheral devices, however, increase the bulk of the portable computer system and have a limited period of operation due to their internal batteries. (P. 3, ll. 14-19.)

Several claimed embodiments in accordance with the invention are directed toward a portable personal computer that includes a base, a controller in the base, and a removable wireless keyboard that can be mounted within the base. (P. 5, ln. 22 to p. 6, ln. 4.) The removable keyboard communicates with the controller through a signal interface when the keyboard is mounted into the base and through a wireless connection when the keyboard is removed from the base. (P. 6, ll. 4-9.) The keyboard has a power supply independent of the base that includes an external alternating current power adapter. (P. 9, ll. 5-7.) An advantage of this arrangement is the keyboard can be used remotely and when received within the base. (P. 11, ll. 13-14.) Moreover, the keyboard in this arrangement can be used remotely without interruption to charge the battery. (P. 9, ll. 7-9.)

## VI. ISSUES

- A. Whether the combination of Honda, Oka, and Merkel discloses a removable wireless keyboard having a power supply with an external alternating current power adapter to support a *prima facie* case of obviousness?
- B. Whether one of ordinary skill in the art would be motivated to modify Oka's device to add an external alternating current power adapter to support a *prima facie* case of obviousness?

## VII. GROUPING OF CLAIMS

In the Final Office Action dated May 9, 2003, claim 18 was rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 5,400,213 to Honda et al. ("Honda") in view of U.S. Patent No. 5,049,863 to Oka ("Oka") and U.S. Patent No. 5,510,953 to Merkel ("Merkel"). Moreover, claim 30 was rejected under 35 U.S.C. § 103(a) over Honda in view of Oka. For purposes of this appeal, claims 18 and 30 are grouped together for analysis and argument.

## VIII. ARGUMENTS

The MPEP requires the Examiner to set forth a *prima facie* case of obviousness including, *inter alia*, prior art references that disclose all of the elements of the claims and a basis for combining or modifying the references. For the reasons described below, the Examiner failed to establish a *prima facie* case of obviousness with respect to claims 18 and 30.

### A. Whether the Combination of Honda, Oka, and Merkel Discloses a Removable Wireless Keyboard Having a Power Supply with an External Alternating Current Power Adapter to Support a Prima Facie Case of Obviousness?

Honda, Oka, and Merkel fail to disclose "a removable wireless keyboard" that "has a power supply independent of said base, and wherein said power supply includes an external alternating current power adapter," as recited by claim 18. Accordingly, as described in detail below, the combination of Honda, Oka, and Merkel does not disclose all of the elements of claim 18 or 30. Therefore, the Examiner cannot establish a *prima facie* case of obviousness with respect to claims 18 and 30.

**1. Honda Discloses a Computer Having a Case and a Keyboard Electrically Coupled to the Case by a Curled Cord**

Honda discloses a computer having a case and a removable keyboard. (Honda, col. 5, ll. 33-34 and 60-61.) The front of the case has a stepped portion on which the keyboard can be placed. (Honda, col. 5, ll. 49-61.) The removable keyboard is electrically connected to the case by a curled cord which extends through a bottom surface of the stepped portion. (Honda, col. 7, ll. 35-38.) Accordingly, the keyboard can be removed from the stepped portion and operated a short distance away from the case. (Honda, col. 7, ll. 38-42.)

**2. Oka Discloses a Computer Having a Keyboard and a Key Input Unit Removable From the Keyboard**

Oka discloses a computer having a keyboard and a key input unit removable from the keyboard. (Oka, col. 2, ll. 26-32.) The key input unit can be a mouse. (Oka, col. 2, ll. 48-49.) The key input unit is electrically connected to the keyboard when the unit is received within a holding section of the keyboard. (Oka, col. 2, ll. 39-47.) When removed from the keyboard, the key input device communicates with the keyboard via optical signals. (Oka, col. 2, ll. 56-63.) "Since the key input unit eliminates the need to use a cable or cord, it is easier to use than the conventional mouse." (Oka, col. 5, ll. 28-30.) The key input unit includes a power source (e.g., a button-type battery) which is switched on by a switch mechanism when the key input device is removed from the keyboard. (Oka, col. 2, ll. 49-53.)

**3. Merkel Discloses a Concealed Locking Assembly for a Removable Portable Computer Keyboard**

Merkel discloses a portable computer having a removable keyboard assembly and a base housing. (Merkel, col. 3, ll. 27-36.) The removable keyboard assembly includes a base pan and a rectangular monoblock support structure receivable within the base pan. (Merkel, col. 3, ln. 60 to col. 4, ln. 1.) The removable keyboard assembly is received in an opening in the base housing. (Merkel, col. 4, ll. 1-3.)

4. **Honda, Oka, and Merkel Fail to Disclose a Removable Wireless Keyboard With a Power Supply Including an External Alternating Current Power Adapter**

Honda, Oka, and Merkel fail to disclose "a removable wireless keyboard" that "has a power supply independent of said base, and wherein said power supply includes an external alternating current power adapter," as recited by claim 18. In the Final Office Action dated May 9, 2003, the Examiner conceded that the cited references fail to disclose all of the features of the claims as follows:

Although, Oka is silent on whether the battery is a non-rechargeable battery or a rechargeable battery which can be recharged by using an external AC power adapter, but [sic] it is well recognized in the art that the benefits of using the rechargeable battery as the power supply instead of using the non-rechargeable battery. One of the benefits for using the rechargeable battery is to save money over a period of time. Therefore, it would have been obvious to one of ordinary skill in the art to use the rechargeable battery with the external AC power adapter as the power supply in the remote keyboard instead of the non-rechargeable battery.

Accordingly, the Examiner correctly admits that the cited references do not disclose an external alternating current power adapter.

To establish a *prima facie* case of obviousness, the law requires the Examiner to provide prior art references that disclose or suggest all of the claim limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970). Accordingly, the Section 103 rejection of claims 18 and 30 should be withdrawn because the cited references fail to disclose all of the limitations of the claims.

**B. Whether One of Ordinary Skill in the Art Would Be Motivated to Modify Oka's Device to Add an External Alternating Current Power Adapter to Support a *Prima Facie* Case of Obviousness?**

The Examiner asserts that even though the cited references do not disclose an external alternating current power adapter, one of ordinary skill in the art would be motivated to add this missing feature to Oka's device. In fact, as described in detail below, one of ordinary skill in the art would not be motivated to modify Oka's device to add an external alternating current power adapter because (a) such a modification would have significant disadvantages, and (b) Oka teaches away from connecting any type of cable or cord to the key input unit.

**1. The Examiner's Proposed Modification of Oka's Device Would Have Numerous Disadvantages**

The Examiner's proposal to add an external alternating current power adapter to Oka's device has numerous disadvantages. First, adding an alternating current power adapter to Oka's key input unit would increase the likelihood that a user would lose the key input unit. For example, if a user at an airport or other location were to remove Oka's key input unit from the computer to recharge the battery as the Examiner suggests, there is a significant chance the user would inadvertently leave the key input unit behind without reinstalling it in the computer. Second, adding an alternating current power adapter would increase the cost of the key input unit instead of decreasing the cost as suggested by the Examiner. Third, adding an alternating current power adapter would require the user to purchase and carry a second power cord to charge the key input unit. Therefore, in contrast to the Examiner's assertion that modifying Oka's device to have an alternating current power adapter is advantageous, one of ordinary skill in the art would not be motivated to modify Oka's device as suggested by the Examiner because the Examiner's proposed modification has numerous disadvantages.

## 2. Oka Teaches Away from Connecting a Cord to the Key Input Device

The Examiner selectively ignores Oka's teaching that the wireless embodiments of the key input unit eliminate the need for a cord or cable. Oka states "[i]t should be also noted that the key input unit is cordless and operates by remote control when it is used as a mouse. Since the key input unit eliminates the need to use a cable or a cord, it is easier to use than the conventional mouse." (Oka, col. 5, ll. 25-29) (emphasis added.) Oka clearly teaches that his wireless key input unit should not have a cord of any type because eliminating the cord makes the unit easier to use. Thus, Oka teaches away from adding an alternating current power adapter and the associated cable or cord to the key input unit. Consequently, there is no motivation to modify Oka's device to include an external power adapter to which a power cord would be attached.

In response, the Examiner asserts that adding an external alternating current power adapter to Oka's wireless key input unit and using an external power cord to charge a rechargeable battery would not "reduce the mobility of the remote unit because the AC adapter and the associated power cord can be removed when the rechargeable battery is charged." This is irrelevant because the mobility of Oka's wireless key input unit is important during use, not during charging. Moreover, in his statement the Examiner tacitly concedes that using the key input unit during charging would impair the mobility of the device. Furthermore, the Examiner's reasoning contravenes an object of Oka's invention—"to provide a computer . . . which permits a data input operation to be easily performed by use of a mouse at any time." (Oka, col. 1, ll. 29-35) (emphasis added.) If a power cord were connected to Oka's mouse, the mobility of the mouse would be impaired, and the object of Oka's invention would be further thwarted.

The law does not allow one reference to be modified to come up with the claimed combination of features when the reasoning for the modification contravenes the object of the invention disclosed in the prior art reference and ignores the portion of the reference that teaches away from making the claimed structure. Nor does the law

allow the reference to be modified when modification would have numerous disadvantages. To meet the burden of establishing a *prima facie* case of obviousness, "the Examiner must show that there is either a suggestion in the art to produce the claimed invention or a compelling motivation based on sound scientific principles." *Ex parte Kranz*, 19 U.S.P.Q.2d 1216, 1218 (Bd. Pat. App. & Interf. 1991). To show such a suggestion, the Examiner must show that "the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." *In re Bell*, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993). Moreover, and importantly for the present appeal, a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would teach away from the claimed invention. *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). This same standard is echoed in the MPEP § 2142:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.

The MPEP goes on to explain that if the references do not "expressly or impliedly suggest the claimed invention," it is the Examiner's burden to "present a convincing line of reasoning" as to why the modification would have been obvious. *Id.* (quoting *Ex Parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Inter. 1985)). This line of reasoning must be more than vague conjecture about *possible* modifications of the prior art.

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. . . . Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so."

MPEP § 2143.01 (*quoting In re Mills*, 916 F.2d 680, 16 U.S.P.Q. 2d 1430 (Fed. Cir. 1990)).

The current rejection of claims 18 and 30 over the combination of Honda, Oka, and Merkel does not comply with Section 103 because one of ordinary skill in the art would not be motivated to modify Oka's device to come up with the claimed combination of features. As explained above, modifying Oka's device as the Examiner suggests conflicts with Oka's teachings, creates a device with numerous disadvantages, and contravenes an object of Oka's invention. The Examiner has accordingly failed to present a convincing line of reasoning as to why Oka's device should be modified to come up with the claimed combination of features. Accordingly, the Section 103 rejection should be withdrawn.

## IX. SUMMARY

Claims 18 and 30 have been improperly rejected because the Examiner failed to establish a *prima facie* case of obviousness. More specifically, the Examiner failed to provide (a) prior art references that disclose all the features of the claims, and (b) a motivation to modify the prior art references to come up with the claimed combination of features. Accordingly, Appellant respectfully requests that the Board reverse the rejection of these claims.

Respectfully submitted,

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**X. APPENDIX**

1. (Cancelled)
2. (Previously Presented) The portable personal computer of claim 18, wherein said base has at least one infrared device for receiving infrared signals.
3. (Original) The portable personal computer of claim 2, wherein said base has at least one infrared device for transmitting infrared signals.
4. (Previously Presented) The portable personal computer of claim 18, wherein the recess is sized to receive both the lower surface and the at least one side surface of said removable wireless keyboard.
5. (Cancelled)
6. (Previously Presented) The portable personal computer of claim 18, wherein said removable wireless keyboard includes a pointing device.
7. (Original) The portable personal computer of claim 6, wherein said pointing device functions as a computer track ball apparatus.
8. (Original) The portable personal computer of claim 6, wherein said pointing device functions as a computer touch pad apparatus.
9. (Previously Presented) The portable personal computer of claim 18, wherein said signal interface includes a hardwired connection.
10. (Previously Presented) The portable personal computer of claim 18, wherein said signal interface includes an infrared connection.

11. (Previously Presented) The portable personal computer of claim 18, wherein said signal interface includes a radio frequency connection.

12. (Previously Presented) The portable personal computer of claim 18, wherein said removable wireless keyboard further includes an infrared transducer.

13. (Previously Presented) The portable personal computer of claim 18, wherein said removable wireless keyboard includes at least one infrared device for at least transmitting infrared signals.

14. (Previously Presented) The portable personal computer of claim 18, wherein said removable wireless keyboard has at least first, second, and third sides perpendicular to said upper and lower surfaces, and at least first and second infrared devices for at least transmitting infrared signals, said first and second infrared devices located on at least two of said first, second, and third sides of said removable wireless keyboard.

15. (Previously Presented) The portable personal computer of claim 18, wherein said removable wireless keyboard includes a radio frequency transmitter and said base includes a radio frequency receiver.

16. (Previously Presented) The portable personal computer of claim 18, wherein said removable wireless keyboard has a first mating connector and said base has a second mating connector, wherein said first mating connector and said second mating connector provide a hardwired connection when said removable wireless keyboard is mounted into said base.

17. (Cancelled)

18. (Previously Presented) A portable personal computer, comprising:

a base having a controller for controlling operations thereof, said base having a recess;  
a display attached to said base; and  
a removable wireless keyboard for communicating with said controller in said base through a signal interface when mounted into said base or through a wireless connection when removed from said base, said keyboard having an upper surface, a lower surface and at least one side surface with at least one of the lower surface and the at least one side surface being received in said recess when said keyboard is mounted in said base, wherein said removable wireless keyboard has a power supply independent of said base, and wherein said power supply includes an external alternating current power adapter.

19. (Previously Presented) The portable personal computer of claim 18, wherein said power supply further includes at least one battery.

20. (Previously Presented) The portable personal computer of claim 19, wherein said at least one battery is charged by said base when said removable wireless keyboard is mounted into said base.

21. (Previously Presented) The portable personal computer of claim 18, further comprising at least one retaining device for securing said removable wireless keyboard to said base.

22. (Previously Presented) The portable personal computer of claim 21, wherein said at least one retaining device includes a spring ball bearing.

23. (Previously Presented) The portable personal computer of claim 22, wherein said at least one retaining device includes a tab and a slot, one of said tab and said slot located on one of said removable wireless keyboard and said base and the

other of said tab and said slot located on the other of said removable wireless keyboard and said base, wherein said tab fits into said slot to secure said removable wireless keyboard to said base.

24. (Previously Presented) The portable personal computer of claim 18, further comprising an ejector mechanism for removing said removable wireless keyboard when said removable wireless keyboard is mounted in said base.

25. (Cancelled)

26. (Previously Presented) The input device of claim 30, wherein said removable wireless keyboard has at least one infrared device for at least transmitting infrared signals.

27. (Previously Presented) The input device of claim 30, wherein said removable wireless keyboard has an upper surface and a lower surface, and at least first, second, and third sides perpendicular to said upper and lower surfaces, and at least first and second infrared devices for at least transmitting infrared signals, said first and second infrared devices located on at least two of said first, second, and third sides of said removable wireless keyboard.

28. (Previously Presented) The input device of claim 30, wherein said removable wireless keyboard has a first mating connector and said base has a second mating connector, wherein said first mating connector and said second mating connector provide a hardwired connection when said removable wireless keyboard is mounted into said base.

29. (Cancelled)

30. (Previously Presented) An input device for a portable personal computer, comprising a removable wireless keyboard capable of being mounted within a base of a

portable computer for communicating with said portable computer through a hardwired interlocking connection when mounted within said base, or through a wireless connection when removed from said base, wherein said removable wireless keyboard has a power supply independent of said computer, and wherein said power supply includes an external alternating current power adapter source.

31. (Previously Presented) The input device of claim 30, wherein said power supply further includes at least one battery.

32. (Original) The input device of claim 31, wherein said at least one battery is charged by said computer when said removable wireless keyboard is mounted into said computer.

33. (Previously Presented) The input device of claim 30, further comprising at least one retaining device for securing said removable wireless keyboard to said computer.

34. (Original) The input device of claim 33, wherein said at least one retaining device is a spring ball bearing.

35-47. (Cancelled)